ORDER NO. TD87070264C2

Service Manual

Mini Cassette

RQ-330

(Black)

Mini Cassette Recorder

This is the Service Manual for the following areas.

[Z]···For all European areas except United Kingdom.

[ZE]···For United Kingdom.

■ SPECIFICATIONS

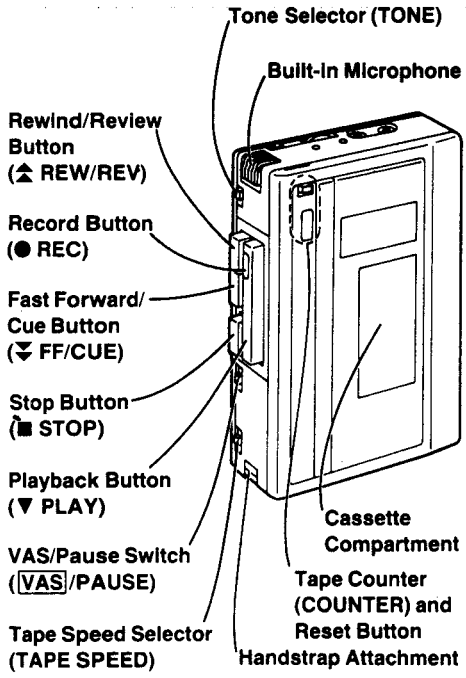
Power Requirement:	Battery; 3V (Two "AA" size batteries) (Panasonic UM-3 or equivalent)
	AC; (Z)·····220V, 50Hz with optional AC adaptor RD-9443HS
	(ZE)·····240V, 50Hz with optional AC adaptor RD-9443HE
Motor:	Electric governor motor
Power Output:	420mW (R.M.S. max)
Frequency Response:	180~7,000Hz
Tape Speed:	1⅞ips (4.8cm/s)
Track System:	2-track monaural recording and playback
Program Time:	1 hour with C-60 cassette tape
Input:	Mic; sensitivity 0.25mV/applicable microphone impedance 200~600Ω, φ3.5
	DC in; 3V (mini jack) φ2.5
Output:	Monitor; 8Ω, φ3.5
Speaker:	4cm PM dynamic speaker (8Ω)
Dimensions:	85×113.5×36.5mm
Weight:	230g, without batteries

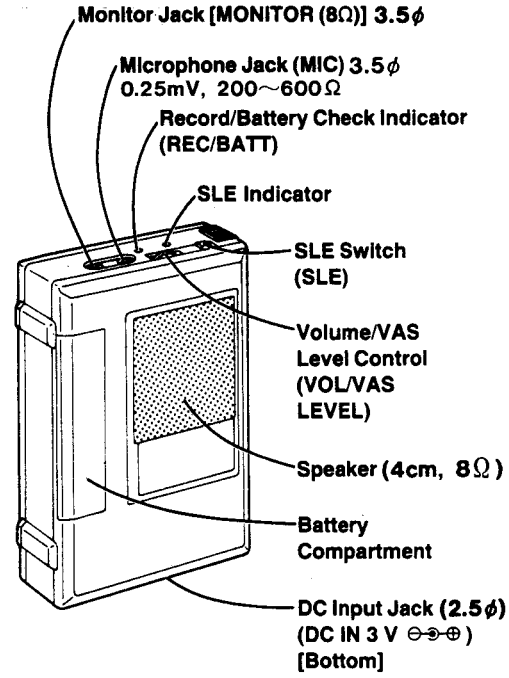
Design and specifications are subject to change without notice.

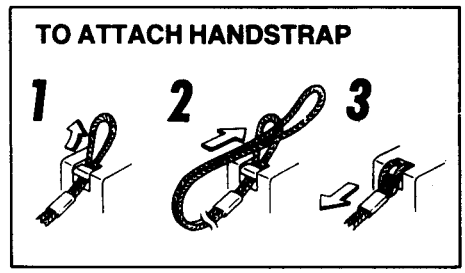
Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

LOCATION OF CONTROLS AND COMPONENTS




Monitor Jack [MONITOR (8Ω)] 3.5φ
Microphone Jack (MIC) 3.5φ 0.25mV, 200~600Ω
Record/Battery Check Indicator (REC/BATT)
SLE Indicator
SLE Switch (SLE)
Volume/VAS Level Control (VOL/VAS LEVEL)
Speaker (4cm, 8Ω)
Battery Compartment
DC Input Jack (2.5φ) (DC IN 3 V ⊖-⊃-⊕) [Bottom]



DISASSEMBLY INSTRUCTIONS

■ Removing the Cassette Lid

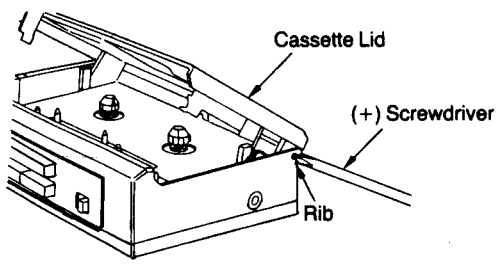


Fig. 1

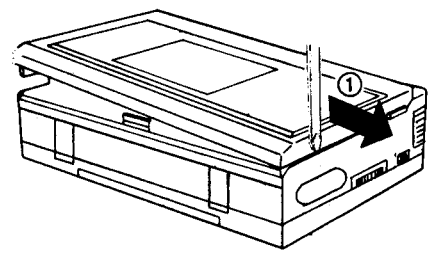


Fig. 2

1. Open the cassette lid.
2. Remove the cassette lid by pressing its rib with the tip of a (+) screwdriver. (Fig. 1)
3. Push the cassette lid in the direction of arrow ①, and disconnect the inside boss. (Fig. 2)
4. Remove the spring (A). (Fig. 3)

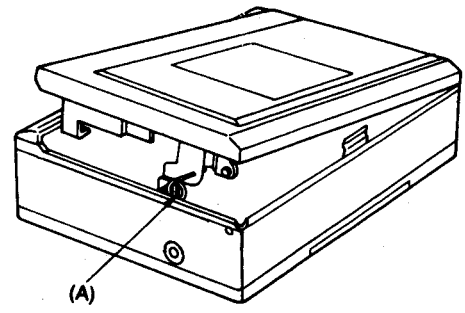


Fig. 3

■How to Replace the Cassette Lid Spring

1. Fit Part Ⓐ on the shaft of the front cabinet.
2. Insert part Ⓑ in the hole in the cassette lib.
3. Fit the boss Ⓒ in the cassette lid (same on right side).

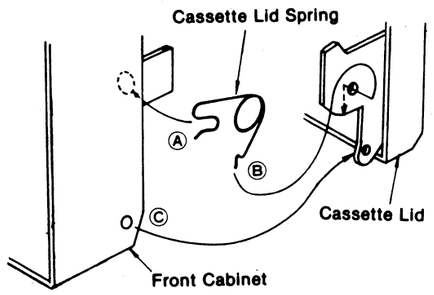


Fig. 4

■Remove the Front Cabinet

1. Remove the deck screw(C) (1.7×4.5)mm×4.

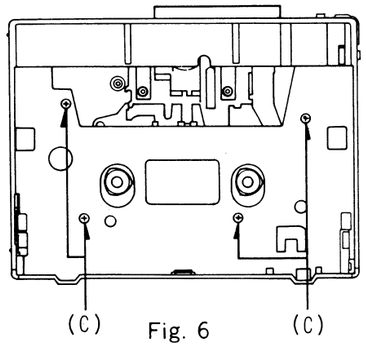


Fig. 6

■Remove the Rear Cabinet

1. Remove the screw (B) (2×10)mm×4

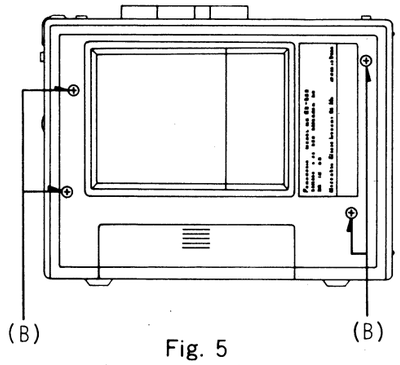


Fig. 5

■Remove the Circuit board

1. Remove the chassis screw (D) (2×16)mm×1.
2. When you screw, don't loss washer.

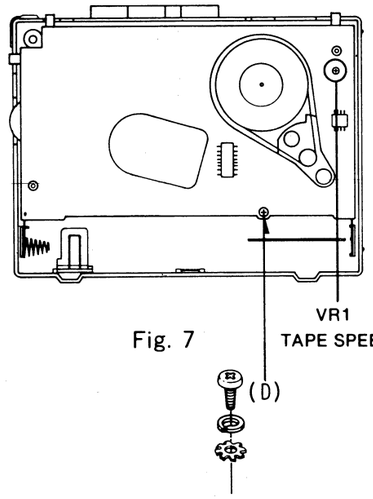


Fig. 7

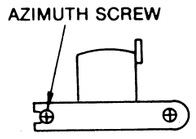


Fig. 8

MEASUREMENTS AND ADJUSTMENTS

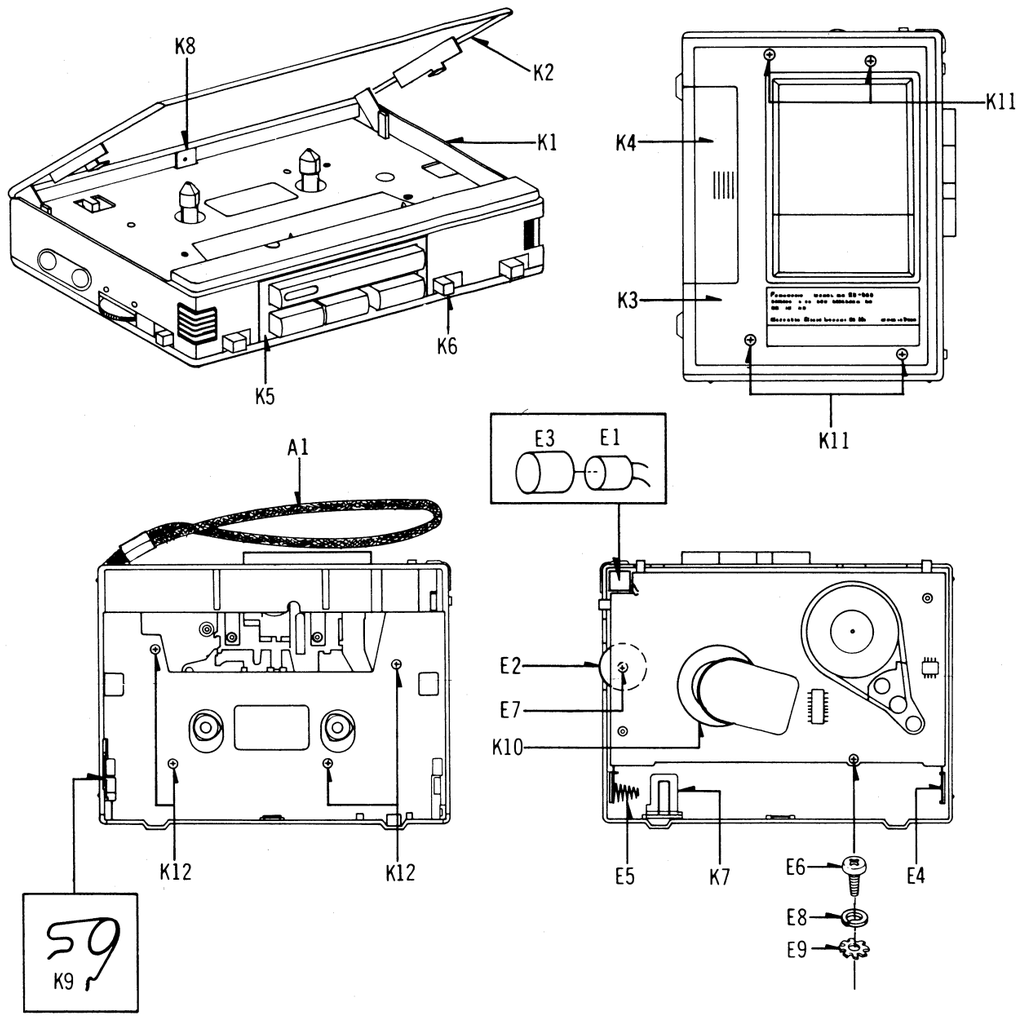
■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
1. Set volume control to maximum. 2. Set VAS/PAUSE switch to OFF. 3. Set SLE switch to OFF.	4. Set TAPE SPEED switch to NORMAL. 5. Set TONE switch to high. 6. Set power source voltage to 3V DC.

■ ADJUSTMENT

ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
Head azimuth	QZZCAA (6.3kHz,−10dB)	Monitor jack (8Ω)	Maximum output	Head adjustment screw (Fig. 8)	Playback mode
Tape speed	QZZCWAT	Monitor jack (8Ω)	3000±60Hz	VR1 (Fig. 7)	(1) Playback the test tape. (2) Adjust VR1 to obtain counter readings within specified tolerances.

CABINET AND ELECTRICAL PARTS LOCATION

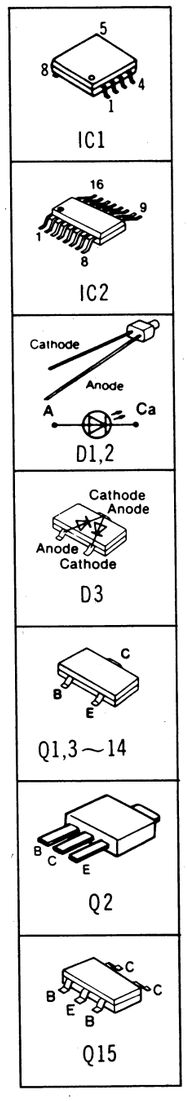


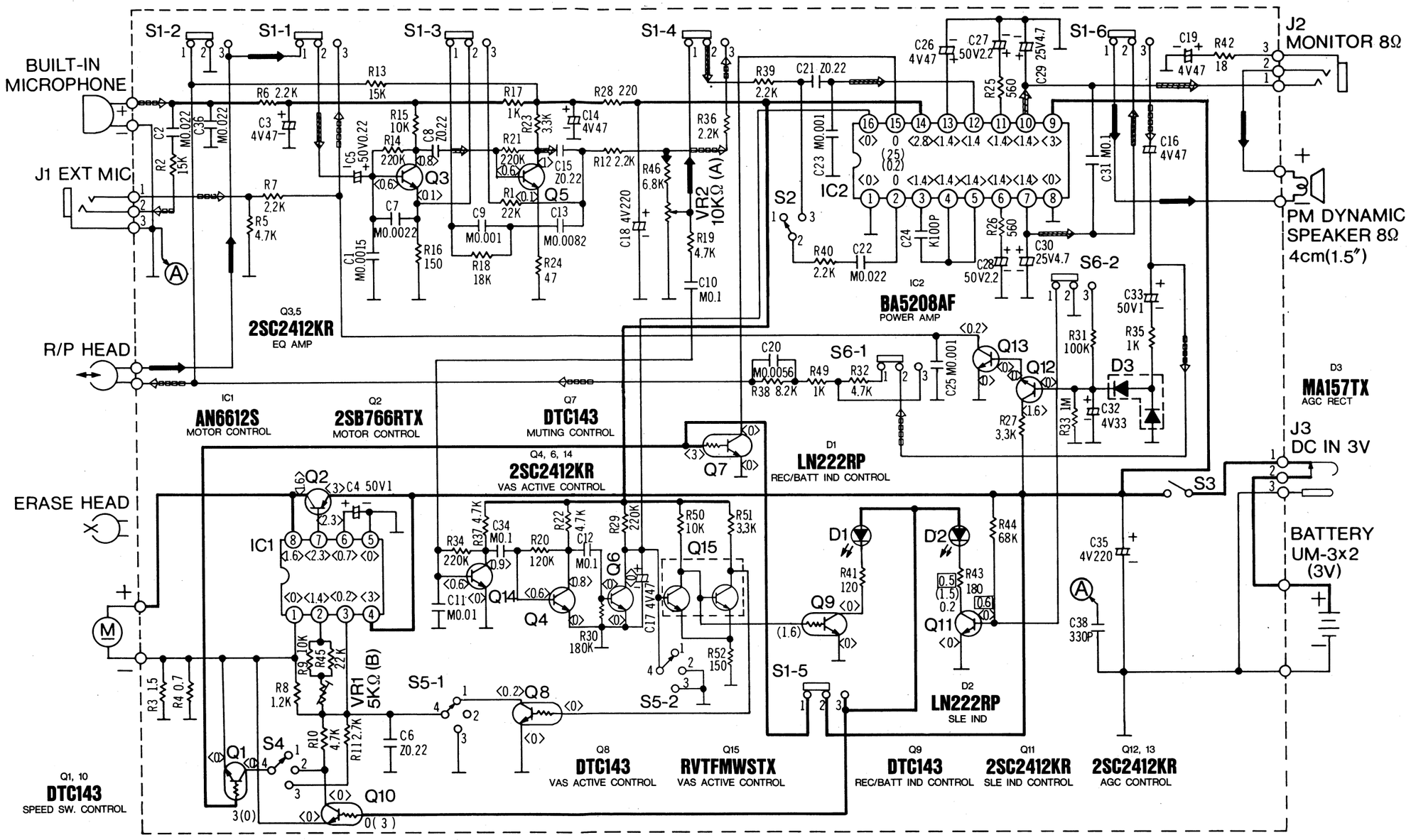
■REPLACEMENT PARTS LIST

(T) Indicates parts that are supplied by TAMACO.

Ref. No.	Part No.	Part Name & Description
	CABINET PARTS	
K1(T)	**RYMQ330ZKT**	Front Cabinet Ass'y
K2(T)	**RYQQ330ZKT**	Cassette Cover Ass'y
K3(T)	**RYFQ330ZKT**	Rear Cabinet Ass'y
K4(T)	**RYNQ330MKT**	Battery Cover Ass'y
K5(T)	**RKE206TZ**	Sky Cabinet
K6(T)	**RBD226TZ**	Slide Knob
K7(T)	**RHE204TZ**	Safety Lever (REC)
K8(T)	**RUS231TZ**	Tape Spring
K9(T)	**RUS232TZ**	Cass. Cover Spring
K10(T)	**RMX207TZ**	Himeklon
K11	**XTNR2+10CFN**	Screw Cabinet
K12	**XTN17+45EFC**	Screw Deck
	ELECTRICAL PARTS	
E1	**WM063Y110**	MIC
E2(T)	**RBT237TZ**	Knob, Volume
E3(T)	**RHG230TZ**	MIC Gum
E4(T)	**RJC260TZ**	Spring Battary(+)
E5(T)	**RJC261TZ**	Spring Battary(−)
E6	**XTN2+16F**	Screw (Earth For Deck)
E7(T)	**XSH14+3**	Screw, Volume Knob
E8	**XWA2B**	Spring Washer
E9(T)	**XWE2×4BN**	Washer
	ACCESSORY	
A1(T)	**RKH210TZ**	Handle Strap
	PACKING MATERIALS	
P1(T)	**RPK383TZ**	Gift Box
P2(T)	**RPP315TZ**	Polyethylene Cover
P3(T)	**RPN1361TZ**	Polylon
	PRINTED MATERY	
Y1(T)	**RQX582TZ**	Instruction Book

SCHEMATIC DIAGRAM

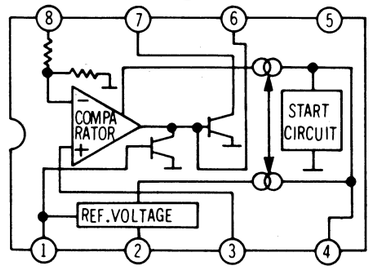




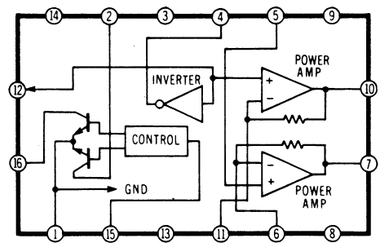
NOTES:

1. S1-1～S1-6: Record/Playback select switch in "PLAYBACK" position. (1…PLAYBACK, 3…RECORD)
2. S2: Tone switch in "HIGH" position. (1…High, 3…Low)
3. S3: Motor Switch in "OFF" position.
4. S4: Tape speed switch in "HIGH" position. (1…High, 2…Normal, 3…Low)
5. S5-1～S5-2: PAUSE/VAS/OFF Switch in "VAS" position. (1…VAS, 2…PAUSE OFF, 3…PAUSE on)
6. S6-1～S6-2: SLE Switch in "OFF" position. (1…OFF, 3…ON)
7. VR1: Tape Speed Control VR.
8. VR2: Volume Control VR.
9. DC Voltage measurement are taken with electronics voltmeter from negative terminal of battery. No mark…PLAY position, < >PLAY and REC position. ( )…REC position. ▭ SLE REC position.
10. Battery current: No signal ……110mA
    Maximum output ……370mA
11. ▬▶ Playback Signal Line
    ▭▭▷ Record Signal Line
    ▭▭▷ Playback/Record Signal Line
    ▬▬ +B Line

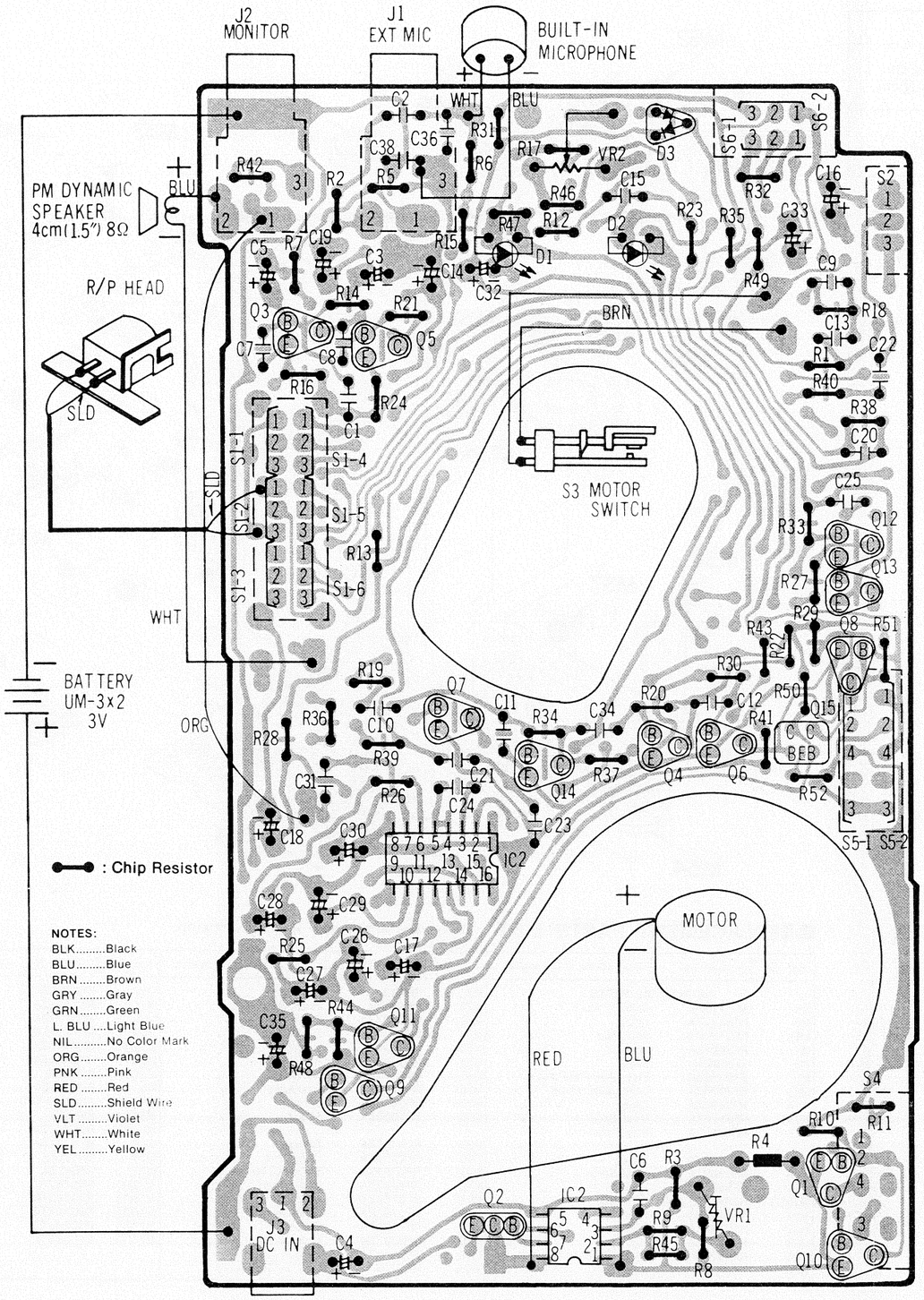
IC1 AN6612S



IC2 BA5208AF



CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM



■ RESISTORS & CAPACITORS PARTS LIST

Numbering System of Resistor

Example:

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value (100Ω)
ERJ	6G	C	J	2R2
Type	Wattage	Shape	Tolerance	Value (2.2Ω)

Numbering System of Capacitor

Example:

ECKD	1H	102	Z	F
Type	Voltage	Value (1000pF)	Tolerance	Peculiarity
ECEA	50	M	R47	
Type	Voltage	Peculiarity	Value (0.47μF)	

Resistor Type		Wattage	Tolerance
ERD:	Carbon Resistor	10 : 1/8W	F : ±1%
ERC:	Solid Resistor	25 : 1/4W	G : ±2%
ERF:	Incombustible Box-Shaped Wire-Wound Resistor	50 : 1/2W 18 : 1/8W 14 : 1/4W 12 : 1/2W	J : ±5% K : ±10% M : ±20%
ERG:	Metal Oxide-Film Resistor	1 : 1W 2 : 2W	
ERM:	Wire-Wound Resistor	3 : 3W	
ERO:	Superstable Metal Film Resistor	S1 : 1/2W S2 : 1/4W 6G : 1/10W 8G : 1/8W	
ERX:	Metal-Film Resistor		
RRJ: ERJ:	Chip Resistor		

※ Capacity are in microfarads (μF) unless specified otherwise, P=Pico-farads.
※ Resistance are in ohms (Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000KΩ

Capacitor Type		Voltage				Tolerance
ECCD:	Ceramic Capacitor (Chitacon)	(ECCD, ECKD Type) 1H : 50V DC		2H : 500V DC		K : ±10% M : ±20%
ECKD:	Ceramic Capacitor (Chitabari)	(ECFD Type) C : 12V DC		D : 25V DC		Z : +80 −20 %
ECFD:	Semiconductor Ceramic Capacitor	E : 50V DC				J : ±5%
ECE□:	Electrolytic Capacitor	(ECQ Type) 05 : 50WV DC		1 : 100WV DC		G : ±2% F : ±1%
ECS□:	Tantalum Fixed Electrolytic Capacitor	(ECE, ECS Type) 0G : 4V		0J : 6.3V		C : ±0.25pF D : ±0.5pF
ECQ□:	Polystyrenc Film Capacitor	1A : 10V 1E : 25V		1C : 16V 1V : 35V		F : ±1pF
ECQS:	Polystyrene Film Capacitor	1H : 50V		1J : 63V		
ECQS:	Polypropylene Film Capacitor	2A : 100V				
ECQV:	T.F Capacitor					
ECU□: RCU□:	Chip Capacitor					
ECBT:	Cylindrical Ceramic Capacitor					

■ REPLACEMENT PARTS LIST

(T) Indicates parts that are supplied by TAMACO.

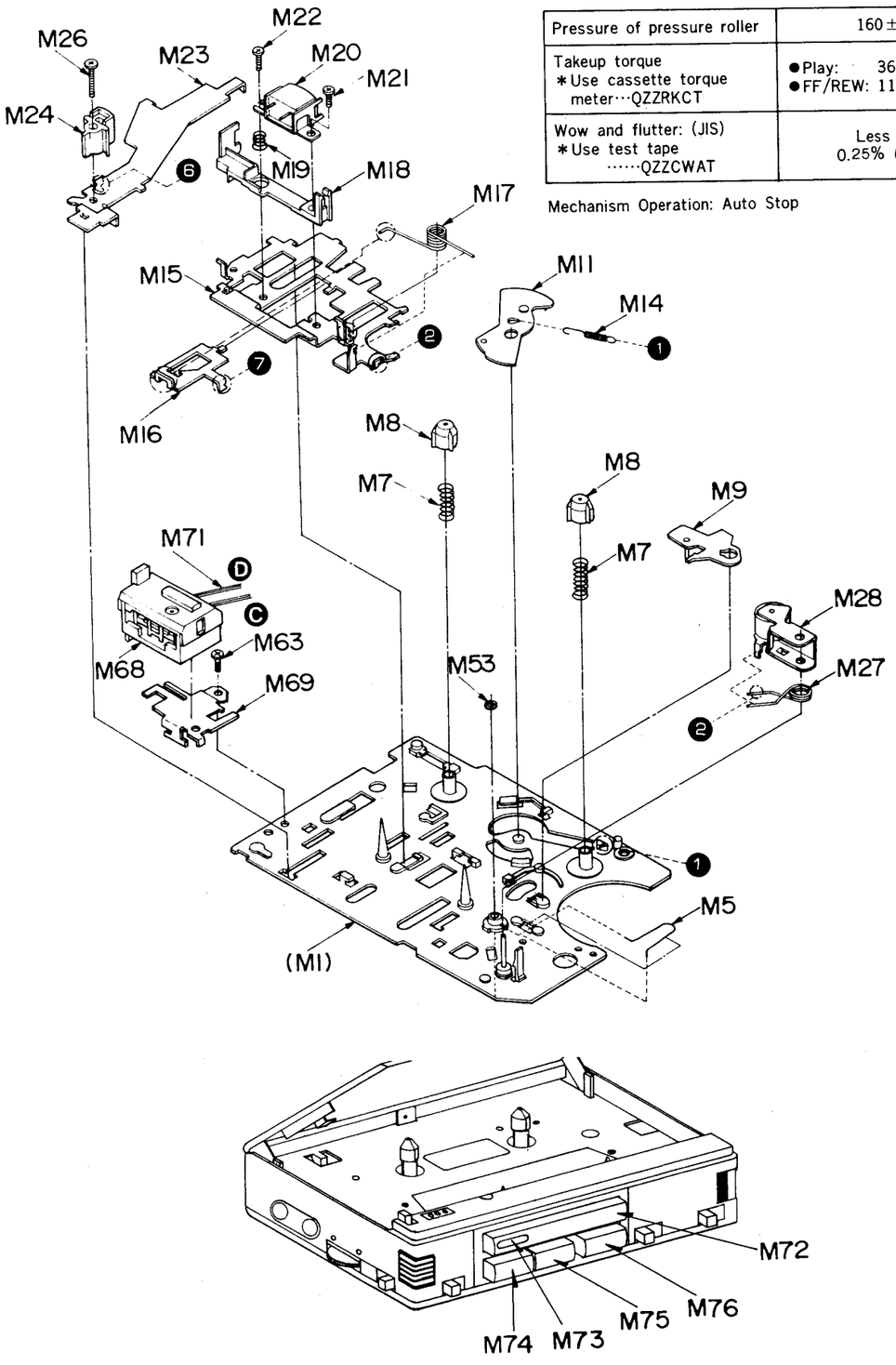
Ref. No.	Part No.	Part Name & Description
	INTEGRATED CIRCUIT, TRANSISTORS AND DIODES	
IC1	**AN6612S**	IC
IC2	**BA5208AF**	IC
Q1,7,8,9, 10	**DTC143**	Transistor (Si)
Q2	**2SB766RTX**	Transistor (Si)
Q3,4,5,6, 11,12,13, 14	**2SC2412KR**	Transistor (Si)
Q15	**RVTFMW5TX**	Transistor
D1,2	**LN222RP**	Diode (LED)
D3(T)	**MA157TX**	Diode
	VARIABLE RESISTORS	
VR1(T)	**RVNCA53B4**	Variable Resistor, 5KΩ (B)
VR2(T)	**RVV1H10A14**	Variable Resistor, 300Ω (A) Volume Control
	SPEAKER	
SP(T)	**EAS4P304T**	Speaker
	SWITCHES	
S1(T)	**RSH2F17Z**	R/P Switch
S2	**RSS2A32Y**	Slide Switch (Tone)
S3	**RFA78ZA**	Leaf Switch
S4	**RSS3B35Y**	Slide Switch (Speed)
S5	**RSS3B27Z**	Slide Switch (VAS)
S6(T)	**RSS2B54X**	Slide Switch (SLE)
	JACKS	
J1,2	**RJJD3M6Z**	MIC/Monitor Jack
J3	**RJJB2Z**	DC IN Jack

Ref. No.	Part No.	Ref. No.	Part No.
	RESISTORS		**CAPACITORS**
R1,45	**RRD18XJ223**	C1	**ECUX1H152MD**
R2,13	**RRD18XJ153**	C2,22,36	**ECUX1H223MD**
R3	**RRD18XJ1R5**	C3,14,16, 17,19,26	**ECEA0GK470**
R4	**RRSA43JR70**	C4,33	**ECEA1HK010**
R5,10,19, 22,32,37	**RRD18XJ472**	C5	**ECEA1HKR22**
R6,7,12, 36,39,40	**RRD18XJ222**	C6,8,15, 21	**ECUX1E224ZF**
R8	**RRD18XJ122**	C7	**ECUX1H222MD**
R9(T)	**TSR18E15J103**	C9,23,25	**ECUX1H102MD**
R11	**RRD18XJ272**	C10,12,31	**ECUX1E104MD**
R14,21,29 34	**RRD18XJ224**	,34 C11	**ECUX1H103MD**
R15,50	**RRD18XJ103**	C13	**ECUX1H822MD**
R16,52	**RRD18XJ151**	C18	**ECEA0GKS221**
R17,35,49	**RRD18XJ102**	C20	**ECUX1H562MDD**
R18	**RRD18XJ183**	C24	**ECUX1H101JC**
R20	**RRD18XJ124**	C27,28	**ECEA1HK2R2**
R23,27,51	**RRD18XJ332**	C29,30	**ECEA1EK4R7**
R24	**RRD18XJ470**	C32	**ECEA0GK330**
R25,26	**RRD18XJ561**	C35	**ECEA0GK221**
R28	**RRD18XJ221**	C38	**RCBC1H331KC**
R30	**RRD18XJ184**		
R31	**RRD18XJ104**		
R33	**RRD18XJ105**		
R38	**RRD18XJ822**		
R41	**RRD18XJ121**		
R42	**RRD18XJ180**		
R43	**RRD18XJ181**		
R44	**RRD18XJ683**		
R46	**RRD18XJ682**		

RQ-330 RQ-330

MECHANISM PARTS LOCATION

Front View

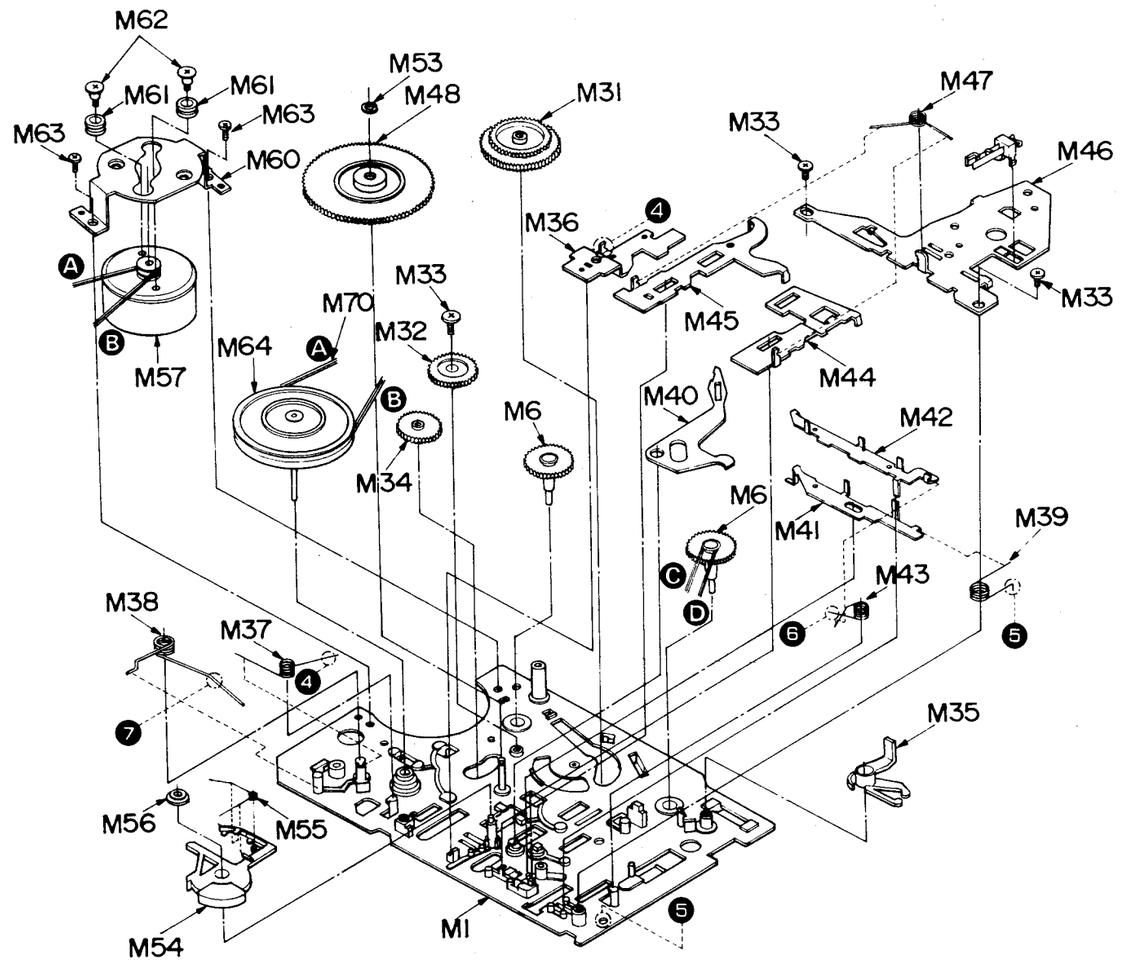


SPECIFICATIONS

Pressure of pressure roller	160±40g
Takeup torque *Use cassette torque meter···QZZRKCT	●Play: 36±14g·cm ●FF/REW: 110±50g·cm
Wow and flutter: (JIS) *Use test tape ·····QZZCWAT	Less than 0.25% (WRMS)

Mechanism Operation: Auto Stop

Rear View



■REPLACEMENT PARTS LIST

(T) Indicates parts that are supplied by TAMACO.

Ref. No.	Part No.	Part Name & Description
	MECHANICAL PARTS	
M1	**RFU115ZA**	Chassis Ass'y
M5	**RFS692ZA**	Spring
M6	**RFG100ZA**	Reel Gear
M7	**RFS693ZA**	Spring
M8	**RFJ69ZA**	Reel
M9	**RFD318ZA**	Play Gear Plate Ass'y
M11	**RFY775ZA**	Gear Lever Ass'y
M14	**RFS694ZA**	Spring
M15	**RFU116ZA**	Head Base
M16	**RFD319ZA**	Play Plate
M17	**RFS695ZA**	Spring
M18	**RFE362ZA**	Head Guide
M19	**RFS696ZA**	Spring
M20(T)	**RJH0C03YYAB**	R/P Head
M21	**RFE363ZA**	Screw
M22	**RFE364ZA**	Screw
M23	**RFY776ZA**	Rec Lever
M24	**RFH17ZA**	Earse Head Ass'y
M26	**XQN2+10F**	Screw
M27	**RFS697ZA**	Spring
M28	**RFR43ZA**	Pinch Roller Ass'y
M31	**RFG101ZA**	Center Gear
M32	**RFG102ZA**	FF Gear
M33	**RFE304Z**	Screw
M34	**RFG103ZA**	Play Gear
M35	**RFY777ZA**	Rec Arm
M36	**RFY778ZA**	Stop Lever
M37	**RFS698ZA**	Spring
M38	**RFS699ZA**	Spring
M39	**RFS700ZA**	Spring
M40	**RFY779ZA**	F, R Lever
M41	**RFY780ZA**	Switch Lever
M42	**RFY781ZA**	Lock Lever
M43	**RFS784ZA**	Spring
M44	**RFY782ZA**	REW Lever
M45	**RFY783ZA**	FF Lever
M46	**RFE367ZA**	Lever Guide
M47	**RFS702ZA**	Spring
M48	**RFG104ZA**	Friction Gear Ass'y
M53	**RFN202ZA**	Washer
M54	**RFY784ZA**	AS Lever
M55	**RFS703ZA**	Spring
M56	**RFX154ZA**	Gear Bush
M57(T)	**RFM113ZA**	Motor Ass'y
M60	**RFD320ZA**	Motor Bracket
M61	**RFI48ZA**	Rubber
M62	**RFE366ZA**	Screw
M63	**XQN16+CF3**	Screw
M64	**RFF50Z**	Flywheel
M68(T)	**RSE241ZA**	Counter
M69	**RFD321ZA**	Counter Bracket
M70	**RFB81ZA**	Motor Belt
M71	**RFB82ZA**	Counter Belt
M72(T)	**RBC262TZ**	Button Play
M73(T)	**RBC263TZ**	Button REC
M74(T)	**RBC264TZ**	Button REW
M75(T)	**RBC265TZ**	Button FF
M76(T)	**RBC266TZ**	Button Stop

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